

Center for Space and Earth Science (CSES)



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AP8-AP9 Engineering Model Validation

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10:00 AM

Moon Room
(TA-03, 40/N125)

Abstract. In-flight feedback data are collected such as displacement damage doses, ionizing doses on board various space vehicles and are compared to predictions performed with (1) proton measurements performed with spectrometers data on board the same spacecraft if any and (2) protons spectrum predicted by the legacy AP8min model and the AP9 mean model.

Biography. Sebastien Bourdarie has been working at the SSpace Environment Department of ONERA since 1993. He is a research engineer in the Research Environment Models and Measurements Team. He has accomplished his Ph.D. during the first three years ("Radiation belts dynamics modelling at the storm time scale"). He is currently involved in physical modelling of electron radiation belts (Salammba code) for the Earth (dynamics behavior) and Jupiter (steady state), as well as artificial radiation belts created by high-altitude nuclear weapons. Related to this activity, he acquired a great experience in processing and interpreting data from particle detectors onboard different satellites. He has developed a space radiation database from various monitors (European as well as American, Japanese, Russian). He is also involved in spacecraft anomaly analysis for the French space agency, European industries, and European operators. He is in charge of supervision and examination of Ph.D. students. He is also an instructor in space environment, at ISAE, Ecole de Mines d'Albi.

His expertise includes radiation environment; radiation belts; solar energetic particles; space radiation environment data base; and analysis of satellite anomalies. He is a member of the science committee board of the Solar-Heliosphere-Magnetosphere (SHM) division of CNES; Member of the science committee board of the Sun-Earth system (PNST) division of CNRS; Member of the science committee board of the Physics division at ONERA; previous Manager for DESP computer infrastructure; previous Chairman of the COSPAR PRBEM panel; and previous Member of the RADECS (RADiation Effects on Components and Systems) council board.

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